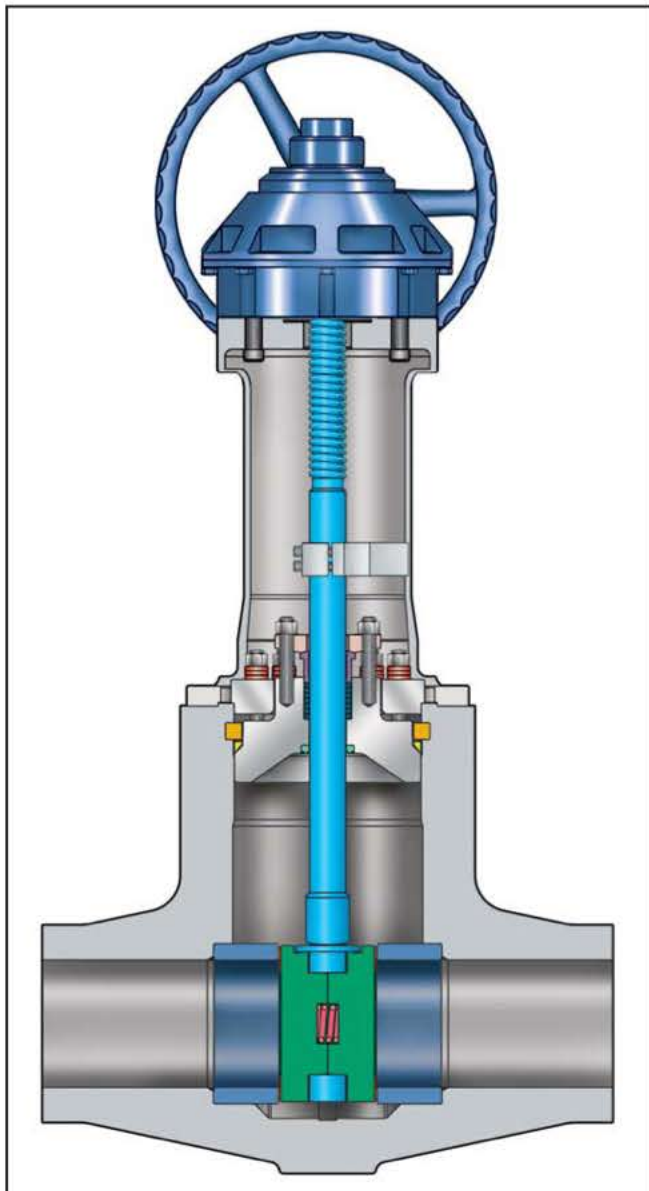




# **PRESSURE SEAL PARALLEL SLIDE GATE VALVES CARBON, ALLOY OR STAINLESS STEEL** ASME CLASSES 600–2500, 2–24" (50–600 mm)

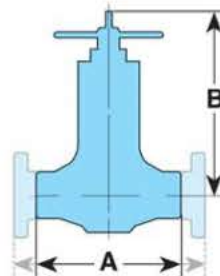


Velan pressure seal parallel slide gate valves are ideal for clean service and steam.

## **DESIGN FEATURES:**

- **Velan pressure seal design.**  
(See page 10 for details.)
- **Unique Parallel Slide Forged Cage Unit Design**  
comprises all operating parts of the slide discs.  
(See page 23 for details.)
- **Designed to ASME B16.34.**
- **Body** made of superior strength forgings and optional cast steel.
- **Velan stem seal** offers tight seal with little to no maintenance over long periods of time.
- **Optional** live-loading of packing.
- **Non-rotating** stem.
- **Hardfaced** seating faces resist erosion.

| CLASS | FIGURE NUMBER |       |
|-------|---------------|-------|
|       | FORGED        | CAST  |
| 600   | 2144P         | 2144K |
| 900   | 7144P         | 7144K |
| 1500  | 3144P         | 3144K |
| 2500  | 4144P         | 4144K |



Flange dimensions are in accordance with ASME B16.5.  
Flanges are welded on.

## FLOW COEFFICIENT CV\*

| SIZE<br>in<br>mm | CLASS           |                 |               |                 |               |                 |               |  |
|------------------|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|--|
|                  | 600             |                 | 900           |                 | 1500          |                 | 2500          |  |
|                  | FORGED<br>2144P | FORGED<br>7144P | CAST<br>7144K | FORGED<br>3144P | CAST<br>3144K | FORGED<br>4144P | CAST<br>4144K |  |
| 2<br>50          | 260             | 260             | 230           | 260             | 230           | 230             | —             |  |
| 2½<br>65         | 260             | 260             | —             | 260             | —             | 230             | —             |  |
| 3<br>80          | 440             | 440             | —             | 440             | —             | 230             | —             |  |
| 4<br>10          | 725             | 725             | —             | 725             | —             | 350             | —             |  |
| 6<br>150         | 1600            | 1600            | —             | 1600            | —             | 850             | —             |  |
| 8<br>200         | 2650            | 2650            | —             | 2650            | —             | 1550            | —             |  |
| 10<br>250        | 3650            | 3650            | 5500          | 3650            | —             | 2500            | —             |  |
| 12<br>300        | 5900            | 5900            | 7000          | 5900            | 5900          | 3650            | 3650          |  |
| 14<br>350        | 8200            | 8200            | 8600          | 5900            | 7200          | 3650            | 4400          |  |
| 16<br>400        | 9500            | 9500            | 12500         | 9500            | 9500          | 6600            | 6600          |  |
| 18<br>450        | 12500           | 12500           | 16000         | 12500           | 12500         | 8600            | 8600          |  |
| 20<br>500        | 16600           | 16600           | 20000         | 16600           | 16600         | 10400           | 10400         |  |
| 24<br>600        | 23000           | 23000           | 30000         | 23000           | 23000         | 14000           | 14000         |  |

\*  $K_v = C_v \times 0.85$

## STANDARD MATERIALS

| PART                                             | MATERIAL                                                   |                                   |                                   |                                  |                                     |
|--------------------------------------------------|------------------------------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-------------------------------------|
| Body <sup>(1)</sup><br>Bonnet <sup>(1)</sup>     | A 105 or<br>A 216 Gr. WCB                                  | A 182 Gr. F11 or<br>A 217 Gr. WC6 | A 182 Gr. F22                     | A 182 Gr. F91<br>>1000°F (538°C) | A 182 Gr. F316                      |
| Seat <sup>(1)(2)</sup><br>Disc <sup>(1)(2)</sup> | A 105 or<br>A 216 Gr. WCB                                  | A 182 Gr. F11 or<br>A 217 Gr. WC6 | A 182 Gr. F22 or<br>A 217 Gr. WC9 | A 182 Gr. F91<br>A 182 Gr. F316  | A 182 Gr. F316 or<br>A 351 Gr. CF8M |
| Stem <sup>(1)(3)</sup>                           | Gr. 410                                                    |                                   |                                   | Gr. 616 or Gr. 660               | Gr. 630 or Gr. 660                  |
| Yoke                                             | Carbon steel                                               |                                   |                                   |                                  |                                     |
| Gasket <sup>(1)</sup>                            | Soft carbon steel–silver plated or Graphite/SS 316         |                                   |                                   |                                  |                                     |
| Gasket retainer                                  | A 182 Gr. F6a Cl. 4                                        |                                   |                                   | Gr. 616 or Gr. 660               | Gr. 630 or Gr. 660                  |
| Spacer ring                                      | Gr. 4140 option Ni or Cad plated or SS                     |                                   |                                   |                                  |                                     |
| Packing ring <sup>(1)</sup>                      | Graphite                                                   |                                   |                                   |                                  |                                     |
| Packing flange                                   | Carbon steel                                               |                                   |                                   |                                  | Stainless                           |
| Gland                                            | Carbon steel                                               | Stainless                         |                                   |                                  |                                     |
| Gland stud                                       | Gr. B7                                                     |                                   |                                   |                                  |                                     |
| Gland nut                                        | Gr. 2H                                                     |                                   |                                   |                                  |                                     |
| Bonnet retainer                                  | Carbon steel                                               | Alloy Steel                       |                                   | Stainless                        |                                     |
| Torque arm                                       | Carbon steel                                               |                                   |                                   |                                  |                                     |
| Yoke bolting                                     | Gr. B7                                                     |                                   |                                   |                                  |                                     |
| Yoke nut                                         | Manganese bronze or Austenitic Ductile Iron A 439 Gr. D-2C |                                   |                                   |                                  |                                     |
| Thrust bearing                                   | Steel                                                      |                                   |                                   |                                  |                                     |
| Handwheel <sup>(1)</sup>                         | Malleable iron or steel                                    |                                   |                                   |                                  |                                     |

(1) Other materials available. (2) Stellite. (3) Hardened.

## DIMENSIONS – BUTT WELD END

| SIZE<br>in<br>mm | ASME 600 (PN 100) |                  |                         | ASME 900 (PN 150)            |                  |                         | ASME 1500 (PN 250)           |                  |                         | ASME 2500 (PN 420)           |                  |                         |
|------------------|-------------------|------------------|-------------------------|------------------------------|------------------|-------------------------|------------------------------|------------------|-------------------------|------------------------------|------------------|-------------------------|
|                  | A                 | B <sup>(5)</sup> | lb <sup>(6)</sup><br>kg | A                            | B <sup>(5)</sup> | lb <sup>(6)</sup><br>kg | A                            | B <sup>(5)</sup> | lb <sup>(6)</sup><br>kg | A                            | B <sup>(5)</sup> | lb <sup>(6)</sup><br>kg |
| 2<br>50          | 7.00<br>178       | 18.50<br>470     | 60<br>27                | 8.50<br>216                  | 18.50<br>470     | 60<br>27                | 8.50<br>216                  | 18.50<br>470     | 60<br>27                | 11.00<br>279                 | 25.25<br>641     | 215<br>98               |
| 2½<br>65         | 8.50<br>216       | 18.50<br>470     | 60<br>27                | 10.00<br>254                 | 18.50<br>470     | 60<br>27                | 10.00<br>254                 | 18.50<br>470     | 60<br>27                | 13.00<br>330                 | 25.25<br>641     | 220<br>100              |
| 3<br>80          | 10.00<br>254      | 25.63<br>651     | 200<br>91               | 12.00<br>305                 | 25.63<br>631     | 200<br>91               | 12.00<br>305                 | 25.63<br>651     | 200<br>91               | 14.50<br>368                 | 27.06<br>687     | 225<br>102              |
| 4<br>100         | 12.00<br>305      | 27.94<br>710     | 250<br>113              | 14.00<br>356                 | 27.94<br>710     | 250<br>113              | 16.00<br>406                 | 27.94<br>710     | 250<br>113              | 18.00<br>457                 | 27.06<br>687     | 300<br>136              |
| 6<br>150         | 18.00<br>457      | 43.50<br>1105    | 800<br>363              | 20.00<br>508                 | 43.50<br>1105    | 800<br>363              | 22.00<br>559                 | 43.50<br>1105    | 800<br>363              | 24.00<br>610                 | 40.94<br>1040    | 850<br>386              |
| 8<br>200         | 23.00<br>584      | 48.31<br>1227    | 1300<br>590             | 26.00<br>660                 | 48.31<br>1227    | 1300<br>590             | 28.00<br>711                 | 48.31<br>1227    | 1300<br>590             | 30.00<br>762                 | 49.38<br>1254    | 1500<br>680             |
| 10<br>250        | 28.00<br>711      | 51.87<br>1318    | 1980<br>900             | 31.00<br>787                 | 51.87<br>1318    | 1980<br>900             | 34.00<br>864                 | 51.87<br>1318    | 1980<br>900             | 36.00<br>914                 | 51.84<br>1317    | 2000<br>909             |
| 12<br>300        | 32.00<br>813      | 68.56<br>1741    | 3300<br>1497            | 36.00<br>914                 | 68.56<br>1741    | 3300<br>1497            | 39.00<br>991                 | 68.56<br>1741    | 3300<br>1497            | 41.00<br>1041                | 62.75<br>1594    | 3500<br>1587            |
| 14<br>350        | 35.00<br>889      | 68.56<br>1741    | 3300<br>1497            | 39.00<br>991                 | 68.56<br>1741    | 3300<br>1497            | 42.00<br>991                 | 68.56<br>1741    | 3300<br>1497            | 44.00 <sup>(7)</sup><br>1118 | 62.75<br>1594    | 3500<br>1588            |
| 16<br>400        | 39.00<br>991      | 74.21<br>1885    | 3900<br>1769            | 43.00<br>1092                | 74.21<br>1995    | 3900<br>1769            | 47.00<br>1194                | 71.50<br>1816    | 3900<br>1769            | 49.00 <sup>(7)</sup><br>1245 | 76.19<br>1935    | 4400<br>2000            |
| 18<br>450        | 43.00<br>1092     | 88.38<br>2245    | 5000<br>2268            | 43.00 <sup>(7)</sup><br>1092 | 89.44<br>2272    | 5000<br>2268            | 43.00 <sup>(7)</sup><br>1092 | 89.44<br>2272    | 5000<br>2268            | 44.00 <sup>(7)</sup><br>1118 | 90.25<br>2292    | 5500<br>2495            |
| 20<br>500        | 47.00<br>1194     | 97.25<br>2470    | 7600<br>3447            | 47.00 <sup>(7)</sup><br>1194 | 97.25<br>2470    | 7600<br>3447            | 47.00 <sup>(7)</sup><br>1194 | 97.75<br>2483    | 7600<br>3447            | 48.00<br>1219                | 95.12<br>2416    | 8500<br>3856            |
| 24<br>600        | 55.00<br>1397     | 117.44<br>2983   | 10000<br>4536           | 55.00 <sup>(7)</sup><br>1397 | 117.44<br>2983   | 10000<br>4536           | 55.00 <sup>(7)</sup><br>1397 | 117.44<br>2983   | 10000<br>4536           | 55.00<br>1397                | 107.81<br>2738   | 14000<br>6350           |

(5) Dimension is center to top in open position.

(6) Weights shown are for forged valves. For weights of cast steel valves, please contact Velan's Engineering Dept.

(7) The following valves do not meet the ASME B16.10 end to end dimensions.